

## Example of required information about insect pest

### Cherry bark tortrix

*Enarmonia formosana* Scopoli

**Host range:** Among its numerous hosts the most important ones are apple, apricot, almond, cherry and sour cherry.

**Morphology:** The adult moth is 6-7 mm size and its wing-spread is 15-18 mm. The forewings are dark brown with yellow, orange cross-stripes. The caterpillars are grayish brown and 14-17 mm in size.

#### **Damage:**

Usually from the lower part of the stem 5-10 mm long with 2-3 mm diameter reddish, crumbly tubes and sometimes pellicles loll out from the tree. In the same time gum can be seen on the stem in large numbers. Taking off the bark from the damaged area we can find the caterpillars in irregularly curving galleries. In the damaged tree the caterpillars chewing the phloem they hurt the vessel cells with causing reduced growth, top wilt, decay of the phloem. In case of apricot this often leads to the death of the tree.

#### **Biology:**

In Hungary there are two generations, they over winter where they cause damage in half or fully mature larval stage.

#### **Control measures:**

##### Cultural and mechanical control:

Before budding the damaged gummed trees should be cleaned with bark scraper, the damaged parts should be cut out and the wounds should be treated and closed. The scraped bark should be burned.

##### Natural enemies and biological control:

Numerous natural enemies are known for example *Dibrachis cavus* Walker, *Campoplex mutabilis* Holmgren, *Hemiteles inimicus* Gravenhorst Ichneumon wasps, *Apanteles hoplitis* Ratzeburg Bracon flies for example *Leskya aurea* Fallén but the adults of seven-spot ladybird too contribute to reduce the numbers of the pests by predating caterpillars, pre-pupae and pupae.

##### Botanical insecticides, minerals, oils and other materials:

Since the caterpillars damage in sheltered areas unfortunately it is very difficult to protect against them. Timing of the control measures should be when the larvae hatch from the eggs. The first spraying should be in May. When spraying we must focus on the skeletal branches and the stem and spray like a good shower with huge amount of liquid. It is advisable to use the spraying gun.

With the help of the sex attractants we can determine the mass of the pests and 7-10 days after the noticed first gradation – at the time when the larvae hatch in huge numbers – we must spray against the pests. When noticing the first empty pupa covers on the stem this can help to determine the timing of spraying. Because of the lasting gradation both spring and summer protection should be carried out at least three time in 10-12 day periods, and with this we can reduce the numbers of larvae that intend to worm in with high efficiency. Products that can be applied in organic farming are the ones containing *Bacillus thuringiensis*, azadirachtin and oil containing products that are applied in the summer and their combinations (Holb, 2005).

## References

**Holb, I. 2005.** Ecological plant protection of orchards and vineyards. Mezőgazda Kiadó, Budapest. In Hungarian